

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

What is claimed is:

Claims 1-54 (Canceled)

Claim 55. (Currently amended) A complex having two polypeptide molecules comprising:

- a) a first polypeptide molecule having five papillomavirus capsid L1 polypeptides or truncated papillomavirus capsid L1 polypeptides, truncated papillomavirus capsid L1 polypeptides comprise papillomavirus capsid L1 polypeptides having: a truncation up to 30 amino acids removed from a carboxy terminus, a truncation up to 9 amino acids removed from an amino terminus and point mutations at cysteines residues within the papillomavirus capsid L1 polypeptides;
- b) a second polypeptide molecule comprising at least one immunogenic epitope and one or more papillomavirus capsid L1 interaction sequence(s), the papillomavirus capsid L1 interaction sequence comprises at least 80% identity corresponding to amino acid sequence beginning with amino acid 396 and ending with amino acid 439 of SEQ ID NO: 1 or fragments thereof;

~~wherein the first polypeptide non-covalently associates with the second polypeptide to form a complex of polypeptide molecules.~~

Claim 56. (Previously presented) The complex of claim 55, wherein papillomavirus capsid L1 polypeptides are selected from the group consisting of HPV6, HPV6a, HPV11, HPV16, HPV18, HPV30, HPV31, HPV33, HPV35, HPV39, HPV42, HPV43, HPV44, HPV45, HPV51, HPV52, HPV54, HPV55, HPV56, and HPV70 papillomavirus capsid L1 polypeptides.

Claim 57. (Previously presented) The complex of claim 55, wherein papillomavirus capsid L1 polypeptides are selected from the group consisting of HPV6b, HPV11, HPV16, and HPV33 papillomavirus capsid L1 polypeptide.

Claim 58. (Previously presented) The complex of claim 55, wherein the papillomavirus capsid L1 polypeptides are HPV11.

Claim 59. (Canceled)

Claim 60. (Previously presented) The complex of claim 55, wherein the second polypeptide molecule is a chimeric polypeptide molecule.

Claim 61. (Previously presented) The complex of claim 55, wherein the five papillomavirus capsid L1 polypeptides or truncated papillomavirus capsid L1 polypeptides are truncated papillomavirus capsid L1 polypeptides.

Claim 62. (Currently amended) The complex of claim 61, wherein the truncated papillomavirus capsid L1 polypeptides comprise papillomavirus capsid L1 polypeptides having ~~one or more amino acids deleted from the carboxy terminus, one or more amino acids deleted from the amino terminus, one or more amino acids deleted from an internal region of papillomavirus capsid L1 polypeptides, or combinations thereof~~ truncation up to 30 amino acids removed from the carboxy terminus or removal of carboxy terminal amino acids up to an ultimate glutamine.

Claim 63. (Currently amended) The complex of claim 55, wherein the second polypeptide molecule comprising at least one immunogenic epitope is derived from a viral-associated protein or a tumor antigen. comprising at least one immunogenic epitope.

Claim 64. (Currently amended) The complex of claim 55, wherein the second polypeptide molecule ~~comprises~~ is derived from a papillomavirus capsid L2 polypeptide or portions thereof.

Claim 65. (New) The complex of claim 55, wherein the one or more papillomavirus capsid L1 interaction sequence(s) comprises a fragment and the fragment comprises at least 90% identity corresponding to amino acid sequence beginning with amino acid 406 and ending with amino acid 439 of SEQ ID NO:1.

Claim 66. (New) The complex of claim 55, wherein the one or more papillomavirus capsid L1 interaction sequence(s) contain at least one proline-rich motif, Pro-Xaa-Xaa-Pro.

Claim 67. (New) The complex of claim 55, wherein the one or more papillomavirus capsid L1 interaction sequence(s) corresponds to amino acid sequence beginning with amino acid 396 and ending with amino acid 439 of SEQ ID NO:1.

Claim 68. (New) The complex of claim 55, wherein the one or more papillomavirus capsid L1 interaction sequence(s) comprises at least one Leu-His-Pro motif.

Claim 69. (New) The complex of claim 68, wherein the Leu-His-Pro motif corresponds to amino acids 432-434 of SEQ ID NO: 1.

Claim 70. (New) The complex of claim 55, wherein the one or more papillomavirus capsid L1 interaction sequence(s) further comprises a hydrophobic region corresponding to amino acids 413 and 416 of SEQ ID NO: 1.

Claim 71. (New) The complex of claim 55 wherein the papillomavirus capsid L1 polypeptides comprise a point mutation corresponding to cysteine position 424 of SEQ ID NO:1.

Claim 72. (New) The complex of claim 55, wherein the one or more papillomavirus capsid L1 interaction sequence(s) contain at least one proline-rich motif, Pro-Xaa-Xaa-Pro and at least one Leu-His-Pro motif.

Claim 73. (New) A particle having two polypeptide molecules comprising:

- a) a first polypeptide molecule having five papillomavirus capsid L1 polypeptides or truncated papillomavirus capsid L1 polypeptides truncated papillomavirus capsid L1 polypeptides comprise papillomavirus capsid L1 polypeptides having: a truncation up to 30 amino acids removed from a carboxy terminus, a truncation up to 9 amino acids removed from an amino terminus and point mutations at cysteines residues within the papillomavirus capsid L1 polypeptides; and

- b) a second polypeptide molecule comprising at least one immunogenic epitope and one or more papillomavirus capsid L1 interaction sequence(s), the papillomavirus capsid L1 interaction sequence comprises at least 80% identity corresponding to amino acid sequence beginning with amino acid 396 and ending with amino acid 439 of SEQ ID NO: 1 or fragments thereof, the first polypeptide assembled with the second polypeptide at physiologic pH or lower to form a non-covalently associated particle with the second polypeptide.